

REMARKS/ARGUMENTS

Status

Claims 2-18, 21-36, 39-49 and 51-54 are under examination. Claims 51 and 54 are independent.

Claim 51 (from which claims 2-18, 21-36, and 52-54 depend) is directed to an apparatus. Claim 51 is amended in this response.

Claim 54 (from which claims 39-49 depend) is directed to a method. Claims 54 and 39-49 have been deemed allowable by the Office. Claim 54 is amended in this response to add the word "and." The amendment does not change the scope or meaning of the claim.

Interview

Applicants thank Examiner Barton for the courtesy of a telephonic interview with the undersigned Applicants' representative and Dr. Steven Collier on September 7, 2006. Changes to claim 51 were discussed. The Examiner agreed that the amendments now reflected in claim 51 appeared to overcome the rejections.

Claim 51

Independent Claim 51 (and dependent claims 2-18, 21-36 and 52-53) were rejected as allegedly obvious in view of either Ramsey *et al.* ("Ramsey") or Blankenstein *et al.* ("Blankenstein") in view of Corio *et al.* (Corio), and in combination with secondary references.

Blankenstein in view of Corio

Corio described a particle sorting apparatus in which user interface functions are preformed via a computer that controls all operations of the sorting apparatus. The

teachings of the Blankenstein et al. reference are discussed in Applicant's prior responses. The Office has suggested that Blankenstein described reversing flow. However, the reversal described in Blankenstein is merely for emptying syringe pumps. This emptying is not in response to a signal from a detector or processor. Blankenstein did not describe or suggest a processor configured to receive a signal from a detection apparatus and in response to the signal actuate a flow control system to reverse the flow of fluid in a branch channel as instantly claimed. Further, Blankenstein did not describe or suggest a flow control system responsive to the processor and adapted to direct biological material into a selected branch channel and to reverse the direction of movement of biological material that has been directed into a selected branch channel, as instantly claimed. Nothing in the Corio references even remotely suggests the reversal of flow or any of the other elements of claim 51. Accordingly, this combination of references did not render the claimed invention obvious.

Ramsey in view of Corio

The teachings of Corio are described above, and the teachings of the Ramsey et al. reference are discussed in Applicant's prior responses. Ramsey did not describe or suggest a processor configured to receive a signal from a detection apparatus and in response to the signal actuate a flow control system to reverse the flow of fluid in a branch channel as instantly claimed. The section of the Ramsey patent relied on by the Office (col. 5, lines 2-5) describes the result of changing the relative potentials at different parts of the device, but does not suggest that changing the relative potentials is desirable in the operation of the device. *In fact, reversing flow appears to render the Ramsey device inoperative.* Further, Ramsey did not describe or suggest a flow control system responsive to the processor and adapted to direct biological material into a selected branch channel and to reverse the direction of movement of biological material that has been directed into a selected branch channel, as instantly claimed. Nothing in the Corio references provides any suggestion or motivation to reverse flow. Accordingly,

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this combination of references did not render the claimed invention obvious.

Conclusion

Claim 51 and dependent claims 2-18, 21-36 and 52-53 were not obvious in view of the references cited by the Office, for the reasons discussed above and others. Applicants respectfully request this rejection be withdrawn and the application be allowed.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Randolph Ted Apple
Reg. No. 36,429

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300

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